Serial No. 09/846,380
Reply to Office Action of April 4, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1.   (currently amended) A method for managing a plurality of high-availability-aware applications components in a networked computer system comprising:

   invoking a registration application programming interface by registering the plurality of high-availability-aware applications components to be managed; and

   invoking callback interfaces of registered applications to dynamically allocate allocating roles and assignments to one or more of registered applications components of the plurality of high-availability-aware applications components to achieve a desired redundancy level based on application component type information.

2.   (currently amended) The method of claim 1, further comprising:
   providing information through the application programming interface to the registered applications components so that related applications components among the registered components may communicate to achieve the desired redundancy level.

3.   (currently amended) The method of claim 2, further comprising:
   maintaining software release domain information,
   wherein the software release domain information is provided to the related applications components during the providing step.

Serial No. 09/846,380
Reply to Office Action of April 4, 2005

4.   (currently amended) The method of claim 1, further comprising:
performing administrative actions on the registered applications
~~components~~ in response to a request from an external management agent.

5.   (currently amended) The method of claim 1, further comprising:
responding to an error by changing roles and assignments of the
registered ~~components~~ applications via the invocation of the callback interfaces
of the registered applications.

6.   (currently amended) The method of claim 5, further comprising:
maintaining application ~~component~~ relationship information,
wherein the application ~~component~~ relationship information is used during
the allocating step and the responding step.

7.   (canceled)

8.   (original) The method of claim 5, wherein the responding step uses
protection group information.

9.   (currently amended) The method of claim 5, wherein the responding step
further comprises:
choosing an appropriate response; and
altering assignments and roles of the registered applications ~~components~~
according to the appropriate response.

10.   (original) The method of claim 9, wherein the appropriate response
includes restart, fail-over, switch-over, node fail-over, and node switch-over.

11.   (currently amended) The method of claim 1, wherein the roles allocated
to the one or more of the registered applications ~~components~~ include off-line,
spare, primary, secondary, and quiescing.

Serial No. 09/846,380
Reply to Office Action of April 4, 2005

12.   (currently amended) The method of claim 1, further comprising:

maintaining application component relationship information,

wherein the application component relationship information is used during

the allocating step.

13.   (canceled)

14.   (original) The method of claim 1, wherein the allocating step uses

protection group information.

15.   (currently amended) The method of claim 1, wherein the allocating step

assigns a specific role and assignment to a self-determining application

component in the registered applications components.

16.   (currently amended) The method of claim 1, wherein the plurality of high-

availability-aware applications components include stand-alone applications

components, proxied applications components, and proxy applications

components.

17.   (currently amended) The method of claim 1, wherein the application

component type information includes functional attributes, recovery parameter

attributes, application component instance level attributes, and application

component assignment level attributes.

18.   (currently amended) A method of allocating an assignment in a

networked computer system comprising:

registering a plurality of components applications through an application

programming interface, wherein the plurality of applications components are

high-availability aware;

Serial No. 09/846,380
Reply to Office Action of April 4, 2005

allocating roles to registered ~~applications~~ components of the plurality of
~~components~~ applications by invoking a callback interface of registered
applications;

allocating the assignment to a first application ~~component~~ selected from
the registered applications ~~components~~ based on application ~~component~~ type
information of the first ~~component~~ application by invoking a callback interface of
the first application;

changing a role of the first application ~~component~~ to primary by invoking a
callback interface of the first application;

determining [[a]] an application specific redundancy level based on the
application ~~component~~ type information; .

allocating the assignment to a predetermined number of secondary
applications ~~components~~ selected from the registered applications ~~components~~
based on application ~~component~~ type information of the secondary applications
~~components~~, wherein the predetermined number is based on the redundancy
level of the application by invoking a callback interface of the secondary
applications;

changing roles of the predetermined number of secondary applications
~~components~~ to secondary by invoking a callback interface of the secondary
applications; and

notifying the first ~~component~~ application by invoking a callback interface of
the first application about the predetermined number of secondary applications
~~components~~ and the predetermined number of secondary applications
~~components~~ about the first ~~component~~ application by invoking a callback
interface of the second applications.

19.   (currently amended) The method of claim 18, further comprising:
detecting an error affecting the first application ~~component~~;

Serial No. 09/846,380
Reply to Office Action of April 4, 2005

selecting a new primary application component from the predetermined number of secondary applications components; and

changing a role of the new primary application component to primary by invoking a callback interface of the new primary application.

20.   (currently amended) The method of claim 19, further comprising:
instructing the first component application, by invoking a callback interface of the first application, to communicate information to the new primary application component.

21.   (currently amended) The method of claim 18, further comprising:
detecting an error affecting the first application component; and restarting the first application component.

22.   (original) The method of claim 18, further comprising:
maintaining software release domain information,
wherein the software release domain information is included in the notifying step.

23.   (currently amended) The method of claim 18, further comprising:
performing administrative actions on the registered applications components in response to a request from an external management agent.

24.   (currently amended) The method of claim 18, further comprising:
maintaining application component relationship information;
wherein the application component relationship information is used in the two assignment allocating steps.

Serial No. 09/846,380
Reply to Office Action of April 4, 2005

25.   (currently amended) A method of allocating an assignment to a plurality
of high-availability-aware applications components in a networked computer
system, the method comprising;

registering the plurality of high-availability-aware components applications
through an application programming interface;

allocating roles to registered applications components of the plurality of
high-availability-aware components applications by invoking a callback interface
of the registered applications;

maintaining application component relationship information;

selecting a first application component from the registered applications
components based on application component type information and the
application component relationship information;

allocating the assignment to the first component application by invoking a
callback interface of the first application;

changing a role of the first application component to primary by invoking a
callback interface of the first application;

determining a redundancy level based on the application component type
information;

selecting a predetermined number of secondary applications components
from the registered applications components based on application component
type information of the secondary applications components and the application
component relationship information, wherein the predetermined number is based
on the determined redundancy level;

changing roles of the predetermined number of secondary applications
components to secondary by invoking a callback interface of the secondary
applications; and

notifying the first application, by invoking a callback interface of the first
application, component about the predetermined number of secondary

applications ~~components~~ and the predetermined number of secondary applications, by invoking a callback interface of the secondary applications, ~~components~~ about the first application ~~component~~.

26.   (currently amended) The method of claim 25, further comprising:
detecting an error affecting the first application ~~component~~;
selecting a new primary application ~~component~~ from the predetermined number of secondary applications ~~components~~ using the application ~~component~~ relationship information; and
changing a role of the new primary application ~~component~~ to primary by invoking a callback interface of the new primary application.

27.   (currently amended) The method of claim 26, further comprising:
instructing the first application ~~component~~ to communicate information to the new primary ~~component~~ application by invoking a callback interface of the first application.

28.   (original) The method of claim 25, further comprising:
maintaining software release domain information, wherein the software release domain information is included in the notifying step.

29.   (currently amended) The method of claim 25, further comprising:
performing administrating actions on the registered applications ~~components~~ in response to a request from an external management agent.

30.   (currently amended) A computer program product for managing a plurality of high-availability-aware applications ~~components~~ in a networked computer system, the computer program product comprising:

Serial No. 09/846,380
Reply to Office Action of April 4, 2005

computer readable program code configured to register the plurality of high-availability-aware applications components to be managed by invoking a registration application programming interface;

computer readable program code configured to dynamically allocate roles and assignments to one or more [[of]] registered applications components of the plurality of high-availability-aware applications components to achieve a desired redundancy level based on application component type information by invoking a callback interface of the registered applications; and

a computer readable medium having the computer readable program codes embodied therein.

31.   (currently amended) The computer program product of claim 30, further comprising:

computer readable program code configured to provide information to the registered applications components so that related applications components may communicate to achieve the desired redundancy level.

32.   (currently amended) The computer program product of claim 30, further comprising:

computer readable program code configured to respond to an error by changing roles and assignments of one or more of the plurality of components applications by invoking a callback interface of the registered applications.

33.   (currently amended) A computer readable medium configured to embody computer programming instructions for managing a plurality of high-availability-aware applications components in a networked computer system, the computer programming instructions comprising:

registering the plurality of high-availability-aware applications components to be managed through an application programming interface; and

\\\CS - 80168/0099 - 74012 v1   9

Serial No. 09/846,380
Reply to Office Action of April 4, 2005

dynamically allocating roles and assignments to registered applications components of the plurality of high-availability-aware applications components to achieve a desired redundancy level based on application component type information by invoking a callback interface of the registered applications.

34.   (currently amended) A computer program product for allocating an assignment in a networked computer system, the computer program product comprising

computer readable program code configured to provide an application programming interface to register a plurality of high-availability-aware applications components;

computer readable program code configured to allocate roles to registered applications components of the plurality of high-availability-aware components applications by invoking a callback interface of the registered applications;

computer readable program code configured to allocate the assignment to a first application component selected from the registered applications components based on application component type information of the first component application by invoking a callback interface of the first application;

computer readable program code configured to change a role of the first application component to primary by invoking a callback interface of the first application;

computer readable program code configured to determine a redundancy level based on the application component type information;

computer readable program code configured to allocate the assignment to a predetermined number of secondary applications components selected from the registered applications components based on application component type information of the secondary components, wherein the predetermined number is

Serial No. 09/846,380
Reply to Office Action of April 4, 2005

based on the redundancy level by invoking a callback interface of the secondary applications;

computer readable program code configured to change roles of the predetermined number of secondary applications components to secondary by invoking a callback interface of the second applications;

computer readable program code configured to notify the first component application by invoking a callback interface of the first application about the predetermined number of secondary applications components and the predetermined number of secondary applications components about the first component application by invoking a callback interface of the secondary applications; and

a computer readable medium having the computer readable program codes embodied therein.

35.   (currently amended) The computer program product of claim 34, further comprising:

computer readable program code configured to detect an error affecting the first application component;

computer readable program code configured to select a new primary application component from the predetermined number of secondary applications components; and

computer readable program code configured to change a role of the new primary application component to primary by invoking a callback interface of the new primary application.

36.   (currently amended) A system for managing a plurality of high-availability-aware applications components in a networked computer system, the system comprising:

Serial No. 09/846,380
Reply to Office Action of April 4, 2005

means for registering the plurality of high-availability-aware ~~applications~~ components to be managed through an application programming interface; and

means for dynamically allocating roles and assignments to one or more of registered applications ~~components~~ of the plurality of high-availability-aware applications ~~components~~ to achieve a desired redundancy level based on application ~~component~~ type information by invoking a callback interface of the registered applications.[[;]]

37.   (currently amended) The system of claim 36, further comprising:

means for responding to an error by changing roles and assignments of one or more of the registered ~~components~~ applications by invoking a callback interface.

38.   (currently amended) The system of claim 36, further comprising:

means for providing information through the application programming interface to the registered applications ~~components~~ so that related applications ~~components~~ may communicate to achieve the desired redundancy level.

39.   (currently amended) The system of claim 36, further comprising:

means for performing administrative actions on the registered applications ~~components~~ in response to a request from an external management agent.

40.   (currently amended) A system for allocating an assignment in a networked computer system, the system comprising:

means for registering a plurality of high-availability-aware ~~components~~ applications through an application programming interface;

means for allocating roles to registered applications ~~components~~ of the plurality of high-availability-aware ~~components~~ applications by invoking a callback interface of the registered applications;

\\\CS - 80168/0099 - 74012 v1   12

Serial No. 09/846,380
Reply to Office Action of April 4, 2005

means for allocating the assignment to a first application ~~component~~ selected from the registered applications ~~components~~ based on application ~~component~~ type information of the first ~~component~~ application by invoking a callback interface of the first application;

means for changing a role of the first application ~~component~~ to primary by invoking a callback interface of the first application;

means for determining a redundancy level based on the application ~~component~~ type information;

means for allocating the assignment to a predetermined number of secondary applications ~~components~~ selected from the registered applications ~~components~~ based on application ~~component~~ type information of the secondary applications ~~components~~, wherein the predetermined number is based on the redundancy level by invoking a callback interface of the secondary applications;

means for changing roles of the predetermined number of secondary \ applications ~~components~~ to secondary by invoking a callback interface of the secondary applications; and

means for notifying the first application ~~component~~ about the predetermined number of secondary ~~components~~ applications by invoking a callback interface of the first application and the predetermined number of secondary applications components about the first ~~component~~ application by invoking a callback interface of the secondary applications.

41.   (currently amended) A mechanism configured to manage a plurality of high-availability-aware applications ~~components~~ in a networked computer system, the mechanism comprising:

a mechanism configured to register through an application programming interface the plurality of high-availability-aware applications ~~components~~ to be managed; and

Serial No. 09/846,380
Reply to Office Action of April 4, 2005

a mechanism configured to dynamically allocate roles and assignments to registered applications components of the plurality of high-availability-aware applications components to achieve a desired redundancy level based on application component type information by invoking a callback interface of the registered applications.

42.   (currently amended) The mechanism of claim 41, further comprising:
a mechanism configured to respond to an error by changing roles and assignments of the registered components applications by invoking a callback interface of the registered applications.

43.   (currently amended) The mechanism of claim 41, further comprising:
a mechanism configured to provide information to the registered applications components so that related applications components among the registered applications components may communicate to achieve the desired redundancy level.

44.   (currently amended) The mechanism of claim 41, further comprising:
a mechanism configured to perform administrative actions on the registered applications components in response to a request from an external management agent.

45.   (currently amended) The mechanism of claim 41, further comprising:
a mechanism configured to maintain additional information relevant to managing the registered applications components.

46.   (currently amended) The mechanism of claim 45, wherein the additional information includes information regarding software release domains, application component relationships, and protection groups.

\\\CS - 80168/0099 - 74012 v1   14